



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,371	01/23/2004	Leendert Wolters	15827-058001	7595

26231 7590 02/21/2007
FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER

ALI, HYDER

ART UNIT	PAPER NUMBER
----------	--------------

3747

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

88

Office Action Summary	Application No. 10/763,371	Applicant(s) WOLTERS, LEENDERT	
	Examiner HYDER ALI	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/05 & 3/29/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by

Baert et al (WO 96/29511).

As to Claim 1, Baert et al discloses a gas mixer 1 for use in an engine system, comprising: a venturi 1 defining a flow area that decreases from an inlet opening 3 to a throat C, the throat C coinciding with a minimum flow area of the venturi; and a gas delivery body 5,6 in the flow area extending transverse to a longitudinal axis of the venturi and positioned between the throat C and the inlet opening 3, the gas delivery body 5,6 adapted to introduce gaseous flow into the venturi at a trailing edge 8 thereof opposite the inlet opening, the trailing edge 8 of the gas delivery body 5,6 substantially coinciding with the throat C. **See page 1, line 3 – line 9 and page 4, line 31 – page 5, line 25.**

As to Claim 2, Baert et al discloses further comprising at least one gas delivery outlet 9 on the trailing edge 8 that substantially coincides with the throat C.

As to Claim 3, Baert et al discloses wherein the venturi 1 extends along a longitudinal axis and the at least one gas delivery outlet 9 is oriented to direct flow out of the gas delivery outlet 9 substantially parallel to the longitudinal axis.

Art Unit: 3747

As to Claim 4, Baert et al discloses wherein the at least one gas delivery outlet 9 is directed downstream.

As to Claim 5, Baert et al discloses wherein the gas delivery body 5,6 has a continuous, unapertured leading edge 7 opposite the trailing edge 8.

As to Claim 6, Baert et al discloses wherein the at least one gas delivery outlet 9 is adapted to (**adapted to is a intended use language, prior art need to show only capable of performing such a function**) meter flow of gaseous fuel in relation to a flow of fluid through the venturi.

As to Claim 7, Baert et al discloses wherein a cross section of the gas delivery outlet 9 is substantially airfoil shaped.

As to Claim 8, Baert et al discloses wherein the gas delivery body 5,6 has a first and second members 5,6 extending transverse to the longitudinal axis of the venturi, the first member 5 angularly displaced from the second member 6.

As to Claim 9, Baert et al discloses wherein the gaseous flow is at least one of a fuel and exhaust.

As to Claim 10, Baert et al discloses an internal combustion engine system, comprising: an engine; and a venturi 1 in an inlet of the engine, the venturi 1 defining a flow area that decreases to a smallest flow area at a throat C of the venturi 1, the throat C defining a boundary between an upstream and downstream portion of the venturi 1; and a gas delivery body 5,6 in the venturi 1, the gas delivery body 5,6 having a trailing edge 8 with at least one gas delivery outlet 9 therein adapted to introduce gaseous flow

Art Unit: 3747

into the venturi, the trailing edge 9 being positioned substantially outside of the downstream portion.

As to Claim 11, Baert et al discloses wherein the venturi 1 extends along a central axis and the at least one gas delivery outlet 9 is oriented to direct flow out of the gas delivery outlet substantially parallel to the central axis.

As to Claim 12, Baert et al discloses wherein the gas delivery body 5,6 has a leading edge 7 opposite the trailing edge 8 that is free of apertures.

As to Claim 13, Baert et al discloses wherein the at least one gas delivery outlet 9 is adapted to (**adapted to is a intended use language, prior art need to show only capable of performing such a function**) meter flow of gaseous fuel in relation to a flow of fluid through the venturi.

As to Claim 14, Baert et al discloses wherein the gas delivery body 5,6 has a leading edge 7 opposite the trailing edge 8 that is free of apertures.

As to Claim 15, Baert et al discloses wherein the gas delivery body 5,6 is configured in a cross pattern.

As to Claim 16, Baert et al discloses wherein the gaseous flow is at least one of a fuel and exhaust.

As to Claim 17, Baert et al discloses a method of mixing gaseous fuel and air, comprising: receiving a flow of air through a venturi, the venturi 1 having a smallest flow area through the venturi at a throat C ; receiving gaseous fuel through an interior of a fuel flow body upstream of the throat C; and receiving the gaseous fuel from the fuel flow body 5,6 into the flow of air substantially at the throat C.

Art Unit: 3747

As to Claim 18, Baert et al discloses wherein receiving the gaseous fuel from the fuel flow body 5,6 into the airflow comprises receiving the gaseous fuel flowing out of the fuel flow body 5,6 substantially parallel to the airflow.

As to Claim 19, Baert et al discloses wherein introducing gaseous fuel into the airflow comprises metering the amount of gaseous fuel in accordance with the airflow.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Warren, II (US 4,515,134) discloses mass flow rate of the airstream flowing through the venture. Zonket et al (US 3,843,338) discloses venture including improved metering of gaseous fuel.

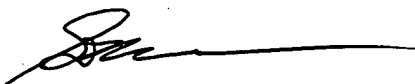
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (571) 272-4836. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Kirk Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hyder Ali

ha


STEPHEN K. CRONIN
SUPERVISORY PATENT EXAMINER